HIGH-VALUE HEALTH CARE PROJECT

An initiative of the Quality Alliance Steering Committee

A Nationally-Consistent Data Aggregation Methodology

Measuring The Cost-Of-Care

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Measurement is an important building block for improving health care quality and value. As health care costs rise – regulators, policymakers and industry leaders are increasingly interested in developing accurate ways to measure and, ultimately to try to reduce health care costs for individuals, as well as society.

Since the need to reliably measure and evaluate the costs of health care in the United States is an ongoing necessity in providing high-quality health care, identifying suitable and valid measurement approaches remains critical. This was the impetus for the High-Value Health Care (HVHC) Project's effort to develop and conduct preliminary testing of a set of cost-of-care measures.

The Quality Alliance Steering Committee (QASC), a multi-stakeholder collaborative comprised of leaders among physicians, hospitals, health insurers, accrediting agencies and the public sector, developed the HVHC Project to support its goals. The Robert Wood Johnson Foundation (RWJF) sponsors the HVHC Project with support from the Engelberg Center for Health Care Reform at the Brookings Institution.

Developing cost-of-care measures that can help those who get, give and pay for care understand how different providers use resources and compare them to national benchmarks was one of the HVHC project's goals. To address cost-based measurement, the project worked with the American Board of Medical Specialties Research and Education Foundation to develop and test episode-based resource measures for 12 common conditions.

The 12 High-Cost Conditions:

1. Acute Myocardial Infarction (AMI)
2. Asthma
3. Breast Cancer
4. Chronic Obstructive Pulmonary Disease (COPD)
5. Colon Cancer
6. Congestive Heart Failure (CHF)
7. Coronary Artery Disease (CAD)
8. Diabetes
9. Gastroesophageal Reflux Disease (GERD)
10. Low Back Pain
11. Pneumonia
12. Sinusitis

Measuring Costs-of-Care: Per-Capita or Per-Episode.

A comprehensive, consensus-based, and nationally consistent method for measuring health care costs currently does not exist. While aggregate, system-level statistics are widely available, more granular and actionable metrics are less common.[1]

Cost-of-care is presently measured in one of two ways: per-capita measurement and per-episode measurement. Per-capita measurement involves capturing all of the health care costs for a given population.

Per-episode measurement quantifies the services involved in the diagnosis, management and treatment of specific clinical conditions. Episode-of-care measures can be developed for the full range of acute and chronic conditions, including diabetes, congestive heart failure, acute myocardial infarction, asthma, low back pain and many others. Because episodes of care can be defined more tightly and specifically around aspects of a given clinical condition, it may be easier to determine accountability based on per-episode than on per-capita measurement efforts. They can also be used to identify detailed opportunities for improvement and action. At the same time, the specificity of episode-based measures may limit the volume of patients for whom the results are pertinent, and the complexity of the measures can also make them more difficult to implement or interpret.

Several proprietary approaches for episode-based measures have been developed and implemented in different areas of the country to generate estimates of physician performance based on cost. However, early efforts to implement these tools experienced limited success.[2]

Characterizing Episodes and Costs of Care.

The HVHC Project addressed the need of cost-of-care measurement for 12 of the most prevalent and important acute and chronic conditions in the United States, as identified by the AQA.[3]

Through a project component called Characterizing Episodes and Costs of Care (C3), the American Board of Medical Specialties Foundation, in collaboration with the Engelberg Center for Health Care Reform at the Brookings Institution, developed detailed specifications for 22 episode-based cost-of-care measures that can be calculated using administrative claims data. Clinical experts – who worked in collaboration with other stakeholders to gain additional public input – shaped the measures making them the most transparent measures available today for these 12 high-cost conditions.

Defining Accountability.

So far it has been difficult to define accountability for episode-based measures in a way that is widely accepted. When quality measures focus only on a particular service, e.g., whether or not a recommended preventive service was performed, assigning accountability can be relatively straightforward – for example, to the physician(s) with the opportunity to provide that particular service. However, many episodes of acute and chronic care are defined to track a wide variety of services across different care settings, rendered by multiple providers and occurring across extended time periods. Therefore, it is not always immediately intuitive how, or to whom, accountability should be assigned.

Table 1 details the 22 measures across 12 conditions that were generated over the course of the project.[4] It also shows the different levels of accountability – such as individual physician, physician practice group, integrated delivery system, or region – that the clinician workgroups recommended.

The clinician workgroups generally agreed that individual physician-level accountability appeared justified for many of the conditions. The acute AMI episode, the breast cancer treatment episode and the episode for community acquired pneumonia hospitalization were exceptions. For example, workgroup members argued that attempting to identify an individual physician responsible for the acute AMI episode would be both technically difficult and not representative of care delivery in acute-care settings. The episode is triggered by a hospital stay for AMI; most hospitals employ large physician teams and any one physician on the team could see a patient on any given day.

Accounting For Differences In Patient Severity.

In order for measures to be accepted by the provider community, physicians must feel confident that the measures adjust for differences in underlying patient severity and risk. C3 project staff accounted for patient severity in several ways.

For several conditions, two episodes were defined – one for stable management of the condition and one for an exacerbation or more clinically significant intervention. In this way, patients can be categorized into one of two sub-groups based on the severity of their condition.

Second, the number and scope of an individual's co-morbid conditions can also influence costs for any given condition. To address this, project staff employees created a risk-adjustment model based on the Centers for Medicare & Medicaid Services' Hierarchical Classification of Conditions (HCCs).

Defining Episode-Related Costs.

For each episode, after identifying that the patients in the episode denominator were relatively homogeneous and representative of typical patients experiencing that condition, the clinician workgroup identified all diagnosis codes, procedure codes and other codes that might be used in billing for treatment. Throughout the process of empirically testing the measures, clinicians had detailed analyses to assist in refining the details of the measure specifications.

Stakeholder Support Through Transparency.

These measures have been developed with significant, detailed input from practicing physicians who represent a range of specialties relevant to each condition.

The measure development process involved a series of deliberate steps where participating physicians took into account existing best practices for a condition before carefully considering how best to use administrative claims data to identify individuals with that condition.

Conclusion And Next Steps.

Until very recently, tools available to analyze and interpret patterns of resource use and quality of health care were very few and broad, only rarely offering insights into what drives the costs in health care. The HVHC C3 project demonstrates that it is possible to fill this gap by developing episode-based cost-of-care measures through transparent and collaborative processes. The 22 measures emerging from this effort represent an important step forward in measuring costs-of-care in a uniform manner, which is critical for successfully identifying and addressing potential sources of unwarranted cost variations.

Efforts are underway to carry out additional, large-scale testing to ensure these measures can be widely used to assess physician performance in tandem with quality measures. Plans call for these measures to be submitted in early 2011 to the National Quality Forum for endorsement, which will work to further increase acceptance of cost-of-care measurement efforts among key stakeholder groups.[5]

Beginning in January 2011, the HVHC Project will start working with the Robert Wood Johnson Foundation's Aligning Forces for Quality initiative to test some of these measures in five communities. Aligning Forces for Quality is the Robert Wood Johnson Foundation's signature effort to lift the overall quality of health care in targeted communities, as well as reduce racial and ethnic disparities and provide models that will help propel national reform.

More Information about the C3 – including a detailed look at the measure specifications – is available online at http://www.healthqualityalliance.org/hvhc-project/cost-care-measurement-development

Some of the information contained in this report was pulled from "Measuring Costs of Care: A Promising Strategy for Episode-Based Measurement" issue brief written and developed by the High-Value Health Care Project.

[1] Health Aff (Millwood). 2010 Jan-Feb;29(1):147-55. Health spending growth at a historic low in 2008. Hartman M, Martin A, Nuccio O, Catlin A; National Health Expenditure Accounts Team.

[2] Lake, T., Colby M., and Peterson, S. Health Plans Use of Physician Resource Use and Quality Measures. Mathematica Policy Research. http://www.medpac.gov/documents/6355%20MedPAC%20Final%20Report%20with%20Appendices%201-24-08.pdf. Accessed January 29, 2010.

[3] AQA Alliance. Cost of Care Measures Related to Specific Conditions or Procedures: Proposed "Starter" Set of Conditions and Procedures. Revised June 2009. http://www.aqaalliance.org/files/CandidateListofConditionsforCostofCareMeasurementApproved.pdf.

[4] More information, including detailed measure specifications can be found at http://www.healthqualityalliance.org/hvhc-project/cost-care-measurement-development.

[5] More information on the NQF process for endorsing efficiency measures can be found here: http://www.qualityforum.org/projects/efficiency.aspx.

Table 1: Characterizing Episodes and Costs-of-Care (C3) Project: Episode-based Measures under Development

#	Condition	Measure Name	Level of Accountability
1	Acute Myocardial Infarction	Episode-of-Care for 30 Days Following Onset	Hospital
2	Acute Myocardial Infarction	Episode-of-Care for Post-Acute Period (Days 31-365 Days Post-Event)	Individual Physician
3	Asthma	Episode-of-Care for Patients with Asthma over a One-Year Period	Individual Physician
4	Breast Cancer	Episode-of-Care for 60-Day Period Preceding Breast Biopsy	Region
5	Breast Cancer	Episode-of-Care for Treatment in Newly Diagnosed Cases of Breast Cancer over a 15-month Period	Region
6	Chronic Obstructive Pulmonary Disease (COPD)	Episode-of-Care for Patients with Stable COPD Over a One-Year Period	Individual Physician
7	Chronic Obstructive Pulmonary Disease	Episode-of-Care for Patients with Unstable COPD over a One-Year Period	Individual Physician
8	Colon Cancer	Episode-of-Care for 21-Day Period Around Colonoscopy	Individual Physician
9	Colon Cancer	Episode-of-Care for Treatment of Localized Colon Cancer	Up to two physicians
10	Congestive Heart Failure (CHF)	Episode-of-Care for Management of Chronic CHF Over One-Year Period	Individual Physician
11	Congestive Heart Failure	Episode-of-Care for Post Hospitalization Management of CHF over 4-Month Period	Individual Physician
12	Coronary Artery Disease (CAD)	Episode-of-Care for Management of Chronic CAD Over One-Year Period	Individual Physician
13	Coronary Artery Disease	Episode-of-Care for Management of CAD Post Revascularization Over a One-Year Period	Individual Physician
14	Diabetes	Episode-of-Care for Diabetes Over a One-Year Period	Individual Physician
15	Gastroesophageal Reflux Disease (GERD)	Episode-of-Care for 12-Month Period of GERD Treatment	Individual Physician
16	Gastroesophageal Reflux Disease	Episode-of-Care for 12-Week Period of GERD Treatment	Individual Physician
17	Low Back Pain	Episode-of-Care for Acute/Sub-Acute Lumbar Radiculopathy With or Without Lower Back Pain	Individual Physician
18	Low Back Pain	Episode-of-Care for Simple Non-Specific Lower Back Pain (Acute and Sub-Acute)	Individual Physician
19	Pneumonia	Episode-of-Care for Community-Acquired Pneumonia Hospitalization	Hospital
20	Pneumonia	Episode-of-Care for Ambulatory Pneumonia	Individual Physician
21	Sinusitis	Episode-of-Care for Ambulatory Management of Acute/Acute-Recurrent Sinusitis	Individual Physician
22	Sinusitis	Episode-of-Care for Chronic Sinusitis	Individual Physician